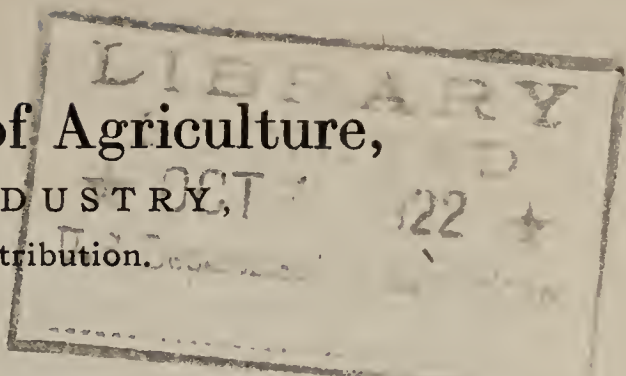


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United States Department of Agriculture,  
BUREAU OF PLANT INDUSTRY,  
Office of Congressional Seed Distribution.  
WASHINGTON, D. C.



## DISTRIBUTION OF TULIP AND NARCISSUS BULBS IN 1922.

### DIRECTIONS FOR GROWING BULBS.

The bulbs sent are of two kinds—tulip and narcissus. The tulip is the smooth, brown, continuous-coated bulb. The narcissus bulb is rougher, the coat is not continuous, it is lighter in color, and usually larger than the tulip bulb. (Figs. 1 and 2.)

These bulbs should be planted in friable rich soil, devoid of coarse manure, dug to a depth of 12 to 15 inches. The bulbs should be set 5 to 6 inches apart and 4 inches deep. They should be planted as

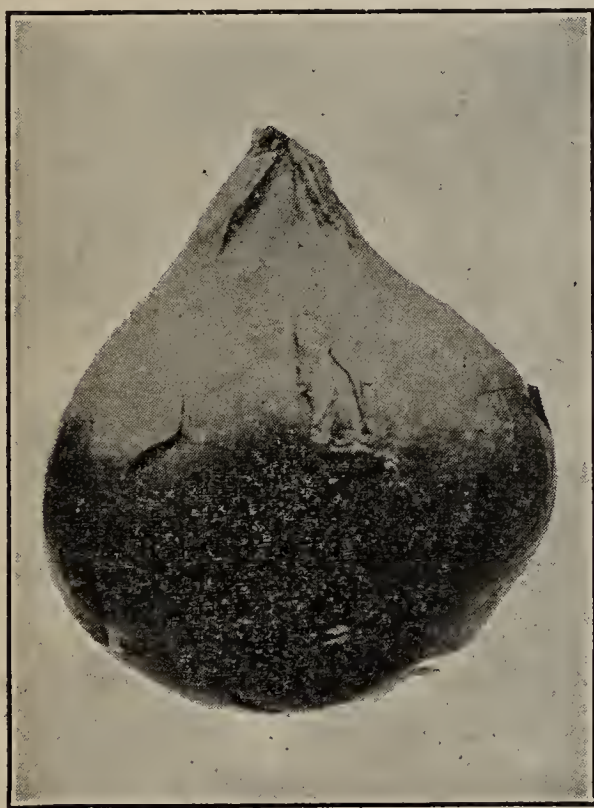


FIG. 1.—Bulb of tulip.



FIG. 2.—Bulb of narcissus.

soon as received. The best time to plant is September, but satisfactory results may often be obtained when planting is delayed as late as December.

If the plants are to be grown in pots or window boxes, light, rich soil should be used. Place 1 to 2 inches of cinders or broken pots in the bottoms of the pots or boxes, to insure good drainage. After planting, place the pots or boxes out of doors and cover them with about 4 inches of ashes or sand; or they may be placed in a dark, cool room or cellar for 8 to 10 weeks, until the bulbs have formed a quantity of roots. They may then be brought into the light and heat for flowering. Keep the soil well moistened from the time of planting, but avoid overmoistening, for if kept too wet the bulbs will decay.



## CULTIVATION.

If the bulbs are planted in beds, the surface of the soil should be loosened after each rain and kept free from weeds. In the late fall or early winter months it is well to cover the beds with a light mulch of straw or leaves to prevent injury to the young roots from the alternate freezing and thawing of the soil. This mulch should be gradually removed in spring, as soon as growth appears above ground. The bulbs are quite hardy and are not injured by severe cold if the soil is well drained.

## LIFTING AND DIVIDING BULBS.

Tulip and narcissus plants are perennial, and if given proper care and grown under suitable soil and climatic conditions will increase and multiply from year to year. The narcissus bulbs may remain in the ground two or three years, or until the clumps begin to crowd. After blossoming in the spring, from six to eight weeks should elapse to allow the foliage to die down partially, when the bulbs may be lifted with a spade or fork. Shake the soil from the roots and store the bulbs in a cool shady place where they will cure. When the old leaves and roots are thoroughly dry they may be easily rubbed off and the clusters of bulbs divided. The bulbs may then be planted in the same manner as the original bulbs. In this way the stock may be increased in a few years. Narcissus bulbs should not be dug more often than once in two years, but tulips should be dug each year.

## NATURALIZING THE NARCISSUS.

The narcissus often becomes naturalized when planted in sod or partial shade, where it will continue to grow, blossom, and multiply for many years without further attention. Simply make a small hole in the soil 5 or 6 inches deep, insert the bulb, pointed end up, press the soil over the top, and nature will do the rest. For naturalizing, avoid planting in rows or rigid geometrical figures. A good plan is to scatter the bulbs like seed and plant where they fall. This method of planting is intensively followed in the home grounds and parks of England and other countries of Europe. In portions of North Carolina, on large estates along the James River of Virginia, and in old gardens in New England, narcissi planted over half a century ago still grow vigorously and every spring produce beautiful blossoms.

## TULIPS.

Brief descriptions of the varieties of tulips (fig. 3) included in the congressional seed distribution follow:

*Artus*.—Single, early, bright deep scarlet.

*Chrysolora*.—Single, early, very large, widely opened flower. Color, a pure golden yellow.

*Keizerkroon*.—Single, early, very large, mixed orange and red.

*Thomas Moore*.—Single, early, bright, clear orange red, shading to crimson.



## NARCISSUS.

Narcissus is the botanical name for the genus of which the daffodil and the jonquil are species. (Fig. 4.)

The narcissus with a large trumpet and flat leaves is commonly called a daffodil. Jonquils have glossy dark-green, very narrow, rushlike leaves. Most of the intermediate forms are hybrids. New varieties are originated by growing bulbs from seed resulting from crossing one type with another. This is a slow process, as several years are required to produce a mature bulb from seed.

Brief descriptions of the varieties of narcissus included in the congressional seed distribution follow:

*Poeticus Ornatus* (pheasant's-eye or poet's narcissus; the true narcissus).—Blossoms pure white, perianth with red, flat, saucer-shaped cup or crown. Very fragrant.

*Barrii Conspicuus*.—Large soft-yellow perianth; short or intermediate form of cup, edged with orange scarlet.

*Emperor*.—Pure golden yellow, very large, with immense trumpets.

*Empress*.—Pure white perianth with a large rich-yellow trumpet.

*Sir Watkin*.—The Giant Welsh daffodil is tall, robust, and large flowered. It is one of the best of the chalice-cupped varieties, having a yellow perianth and a deeper colored flaring trumpet.

*Madam Plempe*.—A large bicolor trumpet variety with the perianth segments rolled a little. It is a strong grower, and when the bulb is handled without bruising it gives excellent satisfaction.

*Madam De Graaff*.—One of the best of the long white trumpet varieties. Its pure white perianth and soft primrose trumpet give a very pleasing contrast.

*Poetaz Elvira*.—Of the long list of hybrids between the bunch-flowered and the poet's narcissus there is no greater favorite than this. It is a good producer and bears two to four flowers with a white perianth and yellow cup.

## WHERE DUTCH BULBS ARE GROWN.

The tulip and narcissus as well as the hyacinth are known generally as Dutch bulbs, because the growing and marketing of these



FIG 3.—Blossoms of tulip.



bulbs form one of the important industries of the Netherlands. Bulbs are also grown extensively in southern France, in England, Ireland, and the island of Guernsey. Most of the bulbs sold by florists and seedsmen in the United States are imported directly from the Netherlands, the annual importations amounting to about \$2,000,000 in value. These bulbs can be propagated and grown successfully along the Atlantic and Pacific coasts and in the region of the Great Lakes, but owing to the cost of labor only comparatively limited areas have thus far been planted. The largest areas devoted to the growing of these bulbs on a commercial scale in this country are to be found in the vicinity of Portsmouth and Richmond, Va.,



FIG. 4.—A field of the Empress narcissus.

Hoxsie, R. I., New Bern, N. C., Puget Sound, and Eureka and Santa Cruz, Calif.

In order to encourage the growing of Dutch bulbs on a commercial scale in this country and to provide American-grown bulbs of superior quality for congressional distribution, the United States Department of Agriculture is conducting investigations in bulb culture at Bellingham, Wash., where the climatic conditions are similar to those of the Netherlands.

Approved:

WM. A. TAYLOR,  
*Chief of Bureau.*

JULY 18, 1922.